

LOOKING BACKWARD

Changes Worked in the Landscape of West Virginia.

BY REMORSELESS FATHER TIME.

Mr. H. H. Maxwell's Contemplative Trip Through the Counties of Taylor, Monongalia, Marion, Harrison, Lewis, Randolph and Upshur—In Some Sections There are No Valleys, but Steep Ravines. An Interesting Description of the Topographical Changes of the State.

Written for the Intelligencer.

The most of us would, I think, be interested in the scene if we could, by some process, place ourselves back in time a few score thousand years and be permitted to look upon the landscapes which preceded those with which we are now familiar. If our translation into past time extended only into thousands of years, perhaps our first and greatest surprise would be in noting how little change has taken place from that period until the present; but there would be some change, and in certain localities it is possible to determine, from present slope of the surface, what the appearance of the former landscape was. I was especially impressed with the truth of this a short time ago in the course of a trip extending across Taylor, Monongalia, Marion, Harrison, Upshur, Lewis and Randolph counties. I had been over much of the ground a number of times before, but this time I went by bicycle, and by following the "ridge roads" when possible, I had a good opportunity of observing and studying the changes of the watercourses between now and then. The character of the adjacent hills. One of the most noticeable features in Taylor, Marion and Monongalia is that there are no valleys, simply steep and sharp ravines, with little or no level land lying along the streams; while the hills rise nearly to the same height, all have gently rounded tops and steep sides. A person standing on the summit of one of the innumerable ridges, and looking across the landscape ten or fifteen or twenty miles, sees only the tops of the hills, one beyond another in almost endless and monotonous succession, and the picture is not unlike that of a rolling prairie of Iowa or Nebraska. But the traveler who crosses what seems a rolling country, finds that it is traversed and cut by deep and steep ravines in all directions. He must be continually climbing down one slope and up the other, and if he is taking a bicycle along with him, the process becomes wearisome, and he learns to require for the "ridge roads," which, instead of cutting straight across the ravines as some of the roads do, follow the tops of the winding ridges and far that reason are more nearly level.

The interesting feature for contemplation is that the country which appears a rolling prairie, when seen from such a distance that the network of ravines does not appear, was once actually a rolling prairie. At a time in geological history, not very far back, the ravines had not been cut. At just what time, or just how long ago, this state of affairs existed, is not for me to say, since more competent observers do not agree among themselves. But the ravines as they exist now, are certainly the product of erosion which began long after the close of the Coal Age. It is new work. It is going on yet. The streams are cutting troughs deeper and sharper all the time.

Where Streams Once Flowed.

The conclusion is that there was a time, and a comparatively recent one, when the streams which now occupy the bottoms of their steep ravines, flowed along broad valleys high up toward the summits of the hills. Every stream, from the Monongahela, which is the largest, to its smallest tributary, very probably had much level land or "bottom land" along its course, and the bordering hills rose from the margins of these valleys with gentle slopes, and speaking of the country at that time as a "rolling prairie," the term should be modified, for the evidence shows that the hills rose with considerable elevation, but not so much, nor with such abruptness, as at present. Since that time, the streams have cut deep into the bedrock, in some places hundreds of feet below where they once flowed. It is asked what is the evidence of this, the reply is that the general appearance of the country shows it to have been so; and the specific proof consists of fragments of the old valley bottoms far up the sides of the hills. Here and there along the Monongahela and its tributary streams may be seen the terraces, which are the evidence of the hills rising from the sides of the valleys. These vary in width from a few feet to half a mile. The streams, in cutting down through these bottom lands, washed the most of them away; but in places portions remain and tell us where the river once flowed. It is not my purpose to enter into a discussion of river terraces in general, in that part of the country for there are many of them, ranging from near the river to far above it, and extending into Pennsylvania. Skilled geologists have studied them, and theories of their cause have been advanced. All of the terraces were probably not produced in the same manner. Some observers believe that the glacial epoch, in one manner or another, is responsible for a portion of them, either by backing the water from an ice dam at Cincinnati, five hundred feet high, or by blocking the streams with gravel until the rivers made new channels high among the hills. The highest terrace at Morgantown is two hundred and seventy-five feet above the present river; another is two hundred feet, another one hundred and seventy and another seventy-five. This shows that the river has had several valleys, one above the other. The highest, of which any portion remains, is that of two hundred and seventy-five feet. When the Monongahela flowed there, the hills did not rise far above its banks. Of course, all the tributary streams were at comparatively the same level. Had a traveler crossed the country then, he would have observed broad, level lands near the streams, with low and gently sloping hills and ridges between. The country was worn down nearly to the base level. When that condition is reached, the valleys widen, the streams become sluggish, and the sand washed by rains from the hills, finds lodgment in the valleys, because the rivers and creeks have not enough current to carry it out. It

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such a country and such a condition as we now find in parts of the west, in Illinois, Indiana and elsewhere. This was the condition of portions of Taylor, Monongalia and Marion counties. It was a somewhat rugged, rolling landscape, with lower hills, wider valleys and more sluggish streams than at present. The evidence is sufficient to warrant us in drawing such a picture of that landscape, ages ago, and probably ages before the first aborigine of the American continent saw it. Not only do the fragments of the ancient valley-bottoms now lying along the side of the hills tell us where the rivers once flowed; and not only may we conclude that we know nearly the shape and the heights of the hills in that age, but we are given a trustworthy glimpse of the forests, which in that remote time covered the hills. Beneath the sand and clay which now cover the highest terrace, logs of wood have been found, much decayed.

Leaves Buried in Clay.

Professor I. C. White, that competent and painstaking geologist who has devoted much time to the study of the Monongahela terraces, found the leaves of our common forest trees buried in the clays which cover the highest terrace. They were beautifully preserved. From this, we know that the forests which covered the country then, were exactly the same as now. So, again the "rolling prairie" must be further qualified. It was probably covered with forests, which may be a contradiction of terms, as a prairie is usually understood to be open country.

That the majority of the terraces are remnants of old river bottoms is unquestioned; but there is reason to believe that some of them have been under water since the river ceased flowing there. This is accounted for on the theory that during the Glacial Age the vast fields of ice which pushed southward from Canada, crossed Ohio and Indiana, into Kentucky, and formed a dam across the Ohio by filling the channel for forty or fifty miles in the vicinity of Cincinnati. It is believed that this ice dam was not less than five hundred feet high, and that it backed the water more than three hundred feet deep over the site of Pittsburgh. If so, the backwater would have ascended the Valley River eight or nine miles above Grafton, and would have stood sixty feet deep on the site of Weston. The terraces along the Monongahela and its tributaries contain much material which might have been deposited on them by ice floating in a lake, such as sand, clay and boulders. These might have been frozen in cakes of ice, and after floating about, might have broken up and been deposited against the face of the ice. These deposits have been found in large quantities along the Monongahela near Morgantown, up to an elevation of two hundred and seventy-five feet above the river; they are abundant at Fairmont, up to two hundred feet above the river; at Clarksburg, on the West Fork, one hundred and thirty feet above the river; and at Weston seventy feet above the river.

The question of the ancient topography of the country along the Monongahela is not affected by the Cincinnati ice dam theory. That the land was once worn down nearly to the base level, and that the streams have since cut deep ravines along the bottoms of the broad valleys, is self-evident. Any one can see it for himself. Why the streams again and again made themselves valleys of considerable width, and as often cut deeper, until they have reached the bottoms of their present troughs, is a question not so easily answered.

The Journey Across the Country from Morgantown to Weston is a pleasant one, the distance being sixty-eight miles, and the difference in altitude between the river there at the lowest places being about two hundred feet.

A Different Topography.

A different topography is observed as Weston is approached. The watercourses are no longer sharp ravines, but on the contrary the bottom lands are of considerable proportions. The streams are not deepening their channels so rapidly as at Morgantown, Fairmont and Grafton, but have remained a long time at practically the same level and the valleys have time to broaden. The hills are lower, the valleys are wider, forming a deep soil of great fertility. The hills are not so nearly worn down as those in Monongalia county were while the river was flowing on the upper terraces, but the bottom lands are no doubt similar to those of the Monongahela, which were long ago washed down by the upper tributaries of the Monongahela are evidently passing through history similar to that through which the lower river has already passed—cutting down through bottom lands and forming ravines. But to study this feature of the question is to leave the valley and to go to the West Fork and pass over to the Buckhannon and Tygart Valley rivers, where a condition now may be seen which I believe is very much like that which existed about Morgantown thousands of years ago, when the Monongahela was flowing in its wide valley level with the summits of the present hills. The valley of the Buckhannon river, in the vicinity of the beautiful village of Buckhannon, is wide, open, level, with a deep soil, and is bordered in most places by hills which slope gently up from the valley, and the tops of the hills are gracefully rounded. The show the result of long erosion; and the broad valley indicates that the river has not materially deepened its channel for ages. The water moves sluggishly. It has not force to cut even the soft clays and sands of its bed. The process of leveling is going on. It is such a process as were ancient Monongahela valley down so nearly to the level of the present Monongahela river. Give the Buckhannon river the pitch and current of the Monongahela above Fairmont, and it will speedily cut a deep gorge right down the middle of its wide, level valley, and in course of time the level land will be washed away, leaving perhaps a narrow strip of level land, and a narrow valley left at Morgantown.

Should a further study of the river history of the Monongahela and its tributaries be desirable, it can be had by passing from Buckhannon to the Tygart valley at Beverly, in Randolph county. Unless a better day for the trip can be had than fell to my lot, I would not advise any one to undertake it on a bicycle. The distance from Buckhannon to Beverly, by the old Staunton and Parkersburg pike, is thirty-one miles; but during the day, counting all the side trips, and the distance I travelled beyond Beverly, I rode seventy-eight miles. It was a forty-mile ride through rain and mud, crossing three ranges of mountains, the road in one part being an unbroken grade of five miles up a mountain. I visited the Roaring Creek coal fields, which have lately been penetrated by railroad.

A laborious ascent of four miles from the Staunton pike places one on the top of Rich Mountain. It is a lofty range, even in the gap where the road crosses.

A Lofly Battle-ground.

Here was fought the battle of Rich Mountain in 1861. It was a sublime battleground. The "battle above the clouds" on Lookout Mountain, so celebrated in history, was not half so vivid as that at Rich Mountain, where General McClellan and Rosecrans first met the Confederates on the field, and by defeating Colonel Pegram, flanked General Zartett and drove the Confederate forces out of Northwest Virginia. I had climbed the western slope of the mountain, in a hundred yards, I reached the top, the clouds broke away temporarily, and a splendid panorama lay before me. Beneath, from five to ten miles distant, lay the broad and level Tygart valley. Beyond, to the south and east, rolled the ranges of the Alleghenies with their outlying spurs and ridges. From where I stood, I could see five separate thunderstorms following one another along the first mountains, the most distant thirty or forty miles away, the nearest eight or ten miles. A descent of five

miles, over a steep and slippery road brought me to Beverly, in the middle of Tygart Valley.

The features of this valley are very much like those of the Buckhannon valley; but the surrounding hills are higher and more rugged, rising in a distance into mountains. This region is well back in the plateau of West Virginia, which has its culmination in the high country of Pocahontas and Pendleton counties. The streams have cut deep, but the hills have not yet been worn down to the graceful rounded forms of those about Buckhannon. The valleys have been widened, and the soil is deep. The same condition prevails both above and below Beverly. At the town of Elkins, seven miles below the level lands are wide. The valley of Leading Creek, which is a tributary of the Tygart river, shows this feature in a remarkable degree.

The question is, will those broad valleys share the fate of similar valleys which once held the waters of the Monongahela? The answer must be, yes. Agents are at work which must ultimately cut through the floors of the Buckhannon and the Tygart valleys, and saw deep ravines far below the present level of the river bottoms. The sluggish rivers are not cutting fast now, they flow quietly down the level valleys; but the work is being done elsewhere. It is far down stream. The falls in the river eight miles below Grafton will some time reach Beverly and Buckhannon. Falls, cataracts and rapids always travel up stream. They wear their way back through the rock, as a matter of fact, and finally reach the sources of the streams. The Valley Falls were no doubt once below Morgantown. They are now within a few miles of Grafton. This is true, at least, of the perpendicular which they represent; but the characters of the cataracts change, and the form of the rapids being long and turbulent rapids. But the water is constantly doing its work and cutting a deep channel up toward the source of the stream. The river is nearly all rapids for many miles above Grafton. These rapids all move up as the water rises and the backwater stream. They came from its ancient valley-floor to its present ravine; they will reach the upper valleys at Beverly and Buckhannon and will work the same destruction there. The altitudes of those present broad valleys will then be shown by fragments of terraces here and there, along the face of the hills, as the now shown by the terraces along the faces of the Monongahela hills.

What the Future May See.

Macaulay's vision of the South Sea is, on one of the broken and half-buried arches of London Bridge and wondering what ancient people lived there, might be made use of, with slight change, to fit a valley of the Monongahela. In vague and future ages, when the Tygart river flows in a narrow gorge hundreds of feet below its present bed, a traveler may climb the precipitous hills above the stream and reach a fragment of "terrace," where the town of Elkins now stands; and when he discovers in the base of a fully eroded rain-washed slope, heavy foundations of man's handicraft, he may wonder what ancient race of "cliff dwellers" resided there, and may admire the "civilization" of the forgotten people. If the forest leaves found by Professor White in the clay on one of the Monongahela terraces have survived from the last age until the present, it is no more than practical reason to conclude that the more substantial creations of man's civilization will endure an equal length of time.

The eastern tributary of the Monongahela in this state is Cheat river. It flows through a country topographically different from that through which the main tributaries flow, and consequently the same conditions are not met with. The Cheat breaks across higher and more rugged mountains; and while, in its upper parts, it has not cut down as nearly to sea level as the other streams, it has, nevertheless, cut itself a much deeper channel than any other tributary of the Monongahela. It has had more work to do in reaching its present level. While the Monongahela and its western tributaries flow almost exclusively through rocks of the Carboniferous age, Cheat has saved the Carboniferous rocks and has far down into the Devonian. It probably has never had more than a nearly level valley floor, and has been nearly always flowing through gorges with here and there a local broadening. Yet, it has its terraces as clearly marked as any on the Monongahela. The best preserved of these terraces which I have seen is at Holly Meadows, three miles below the town of Parsons, in Tucker county. It is a level, more than two hundred feet above the present bed of the river. The strata of rock are tilted at a sharp angle, and the edges, over which the river once flowed, are planned off, and on top of this solid rock rest water-paved valley floors. Fragments of terrace, at about the same level, are found everywhere along the river within a few miles.

HU MAXWELL.

False Statement Corrected.

To the Editor of the Intelligencer. SIR:—A false statement is being circulated in the state papers, which I desire to correct. It is stated that the board of regents of these schools at the recent meeting, adjourned until the 14th of July, in order to have time to investigate charges against the principal, made by a blind-man named Pinkus, who was once a pupil of this school, did make so-called charges against the principal, that they were very short time, and so little impression did they make, that the board did not deem it necessary to examine the witnesses that the principal had on hand to expose the character and animus of this man. He was afterward ordered off the premises by the principal. But this transaction with Pinkus compelled the principal to lay bare, before the board, certain grave irregularities of long standing, and an unwholesome state of affairs among some of the officers and teachers. It was these charges, brought by the principal, which the board desired to have time to investigate, and it was under circumstances that the principal offered his resignation.

C. D. HILL.

Principal.

Rumney, W. Va., June 17.

If the Baby is Cutting Teeth.

Be sure and use that old and well-tried remedy, Mrs. Winslow's Soothing Syrup, for children teething. It soothes the child, softens the gums, allays all pain, cures wind colic and is the best remedy for diarrhoea. Twenty-five cents a bottle.

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It isn't fair

the way the work of the human race is proportioned out and distributed. Look at the house-drudgery of women. Compare it in its hardness and weariness with the occupations of most men!

The only way out of it is to use

Pearline.

Use Pearline, and take the drudgery away from housework.

Pearline makes woman's work womanly and healthful and fit for her to do. All the washing, all the cleaning, and hundreds of other things besides, are made easy with Pearline.

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THE BIG CITY DOCTOR

At the Annual Meeting of the State Medical Society in a Little City of a Little State.

To the Editor of the Intelligencer.

SIR:—The following incident at the last meeting of the State Medical Society, at Charleston, will explain itself.

There was a great doctor in a great medical city.

Who could not find work enough in his own home.

For the people found him out. Oh, what a great pity!

So he was compelled in other places to count his own home.

He stopped at the capital of a state much smaller.

Where he thought that the people wouldn't know very much.

Where he would, without doubt, be in knowledge much taller.

Thinking surely the people's spare cash he could touch.

It chanced while he was there that the Medical Society.

Held its annual meeting in that capital town.

Where papers were read of almost every variety.

Where medical questions were all done up brown.

Our Big City Doctor said: "Here's my opportunity."

To make myself famous in this little state.

I will force myself on them with great opportunity.

Of my superior skill and talents I'll prate.

That will give me a prestige in this rural city.

It will be an endorsement of infinite worth.

My praise will be sung in words flattering and witty.

The fame of my skill will be spread south and north."

So he told a few members that he had a good paper.

That before the society he should be happy to read.

It would be more instructive, in knowledge much deeper.

Make them feel that he was a doctor, and that they'd need.

Some fell into the trap and allowed him to fool them.

But some more discretion and wisdom.

They said that the fox was not able to gull them.

Although from the country, so soft on the tongue, he made.

They adopted a motion that volunteer papers.

Must, by no means, before regular essays be read.

This aroused the man's ire and he cut some queer capers.

He grew so enraged he almost lost his head.

He said in such a mean way he was slighted.

He'd withdraw and not give us his paper at all.

No one was shed; every one was delighted.

When he put up his paper and went from the hall.

He then our joys tried to throw a wet blanket.

And thus make us feel the full weight of his ire.

By refusing to come to our magnificent banquet.

Thus hoping to quench the doctors' jubilation.

But the banquet went on with its fun and its merriment.

All thoughts of the angry doctor to oblivion were tossed.

No doubt he moaned over his unpopularity.

And cursed his ill luck for the chance he had lost.

Now, to have some revenge for this dreadful indignity.

He shared his goose gull and writes a critique.

Abounding in falsehood and slanderous malignity.

Thinking thus for his slight his vengeance to wreak.

He said all the papers were lame, without merit.

Poorly written, not one of them up to the times.

That the members displayed a great absence of spirit.

Having failed the high mountain of science to climb.

In regard to the banquet he makes a false insinuation.

Which, if spoken out boldly, meant lies and backbiting.

For nothing went wrong on that festive occasion.

But all with the utmost propriety moved. If my readers recall to their minds the old fable.

Of the fox and the grapes, which he said were too sour.

I think there's not one but to judge, would be able to see you.

What allied the poor doctor in that bitter hour.

So my Big City Doctor, let me advise you to be wise.

Don't be quite so sure country people are green.

For be sure you'll find some will be able to see you.

And by whom in your true colors you will be seen.

Wheeling, June 20. RUSTICUS, M. D.

HOME SECRETS.

Wheeling Mothers Keep Them, but with a Little Light There Need be None.

How carefully mother guards the secrets of her boys and girls. At night as she carefully tucks the bed clothes round them she chides and warns that mother will be angry if they repeat last night's offense, softly saying to herself it's only a habit, but I must break them of it. This is mother's mistake. The children cannot help it, and sweet, clean dry beds can be the resting place of every child when it is understood that the cause is not a habit, but a weakness that can be cured.

Active life of the little ones tends to weaken the kidneys, and weak kidneys means inability to retain the urine. This is a condition, not a habit, and should have the same prompt attention you give to the marked symptoms of urinary disease. One of Doan's Kidney Pills taken twice a day and at bed time will strengthen the kidneys of a child and in a short time there will be no cause to scold, for the so-called habit will disappear promptly.

Here's a grateful mother that adds her endorsement to our words:

Mrs. William McElroy, of No. 282 West Belmont Street, Mansfield, Ohio, says: "My little boy, when he was eight weeks old, was attacked with rheumatism. He recovered from the immediate effects of it, but ever since he has had weak kidneys. This has given me a great deal of trouble both during the night and the day on account of the inability to retain the urine. It apparently had the effect of making him feel poorly, for his appetite flagged and he did not thrive. We were anxious to get something that would benefit him, so when we noticed more than one account of Doan's Kidney Pills curing such cases, we got him a box. We gave him one pill at a time and were much pleased that he was taking a turn for the better and showed steady improvement. We can recommend Doan's Kidney Pills for this distressing ailment in children."

Doan's Kidney Pills are for sale by all dealers, 50 cents per box, six boxes for \$2.50 by Foster-Milburn Co., Buffalo, N. Y., sole agents for the United States.

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